

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

J&J Docket No. **DEP5253USNP**

MMB Docket No. **1671-0295**

Confirmation No.: **3037**

Application of: **Aram et al.**

Group Art Unit: **3733**

Serial No. **10/812,216**

Examiner: **Michael J. Araj**

Filed: **March 29, 2004**

For: **Method and Apparatus for Arthroscopic Bone Preparation**

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APPEAL BRIEF

Sir:

This is an appeal under 37 CFR § 41.31 to the Board of Patent Appeals and Interferences of the United States Patent and Trademark Office from the rejection of the claims 1-21 and 30-36 and the withdrawal of claims 37-44 of the above-identified patent application. These claims were indicated as rejected or withdrawn in an Office Action dated July 25, 2008. A \$510.00 fee then required under 37 CFR § 41.20(b) (2) has previously been paid. The Director is hereby authorized to charge the difference between the previously paid amount and the amount now required under 37 CFR § 41.20(b) (2),

believed to be an additional \$30.00, to Account No. 13-0014. Also, please provide any extensions of time that may be necessary and charge any fees that may be due to Account No. 13-0014, but not to include any payment of issue fees.

(1) REAL PARTY IN INTEREST

DePuy Products, Inc. of Warsaw, Indiana is the assignee of this patent application, and the real party in interest.

(2) RELATED APPEALS AND INTERFERENCES

There are no appeals or interferences related to this patent application (serial no. 10/812,216).

(3) STATUS OF CLAIMS

Claims 37-44 were withdrawn by the Examiner.

Claims 22-29 have been canceled.

Claims 1-21 and 30-36 are rejected.

Claims 1-21 and 30-44 are being appealed, and claims 1-21 and 30-36 are shown in the Appendix attached to this Appeal Brief.

(4) STATUS OF AMENDMENTS

Appellants have filed no amendments after receipt of the July 25, 2008, Office Action (the “Office Action”).

(5) SUMMARY OF CLAIMED SUBJECT MATTER

The present invention relates to a method and system for arthroscopic bone preparation. In one embodiment, a tibia alignment block 100 includes pin alignment holes 112 and 114 which are used to drill holes in a tibia. (Appellants' specification at page 18, lines 10-15 and FIG. 10). Alignment pins 26 and 28 are inserted into the drilled holes through the alignment block 100. (Appellants' specification at page 18, lines 18-23 and FIG. 12). A wire saw 30 is positioned around the tibia and through slots 102 and 104 of the block 100 which guide the location of the wire saw 30. (Appellants' specification at page 19, lines 10-12 and FIG. 13).

In another embodiment, after the alignment pins 26 and 28 are positioned, the block 100 is removed. (Appellants' specification at page 29, lines 9-12 and FIG. 26). One of the pins (26) is positioned within a pin receiving cavity 264 in an adapter body 256 while a looped wire saw 252 rides within a circumferential groove 268 and around the other pin (28). (Appellants' specification at page 29, lines 12-18 and FIGs. 25-26). When the adapter is rotated and advanced toward the tibia along the pin 26, the looped wire saw 252 is rotated by friction and advanced along the pin 28 toward the tibia. The end of the adapter body 260 includes cutting teeth 266. (Appellants' specification at page 28, lines 19-21 and FIG. 25). Accordingly, as the adapter body 260 and the looped wire saw 252 contact the tibia, the adapter body 260 and the looped wire saw 252 cut the tibia.

The additional information required by the United States Patent Office as set forth in MPEP 1205.02 is as follows.

1) A concise explanation of the subject matter defined in each of the *independent claims* involved in the appeal, which must refer to the specification by page and line number, and to the drawing, if any, by reference characters.

Claims 1, 30 and 37 are independent claims.

Claim 1

A wire cutting system for resecting a bone through incisions of the type utilized for arthroscopic procedures (Appellants' specification at page 11, lines 9-15 and FIGs. 1-5), the system comprising:

a first alignment pin configured to be inserted through one of the incisions into a bone in a first orientation (Appellants' specification at page 12 lines 9-14 and FIG. 4);

a second alignment pin configured to inserted through one of the incisions into the bone in a second orientation (Appellants' specification at page 12, lines 9-14 and FIG. 12);

a wire saw (Appellants' specification at page 12, lines 19-20 and FIG. 4); and

wherein the first alignment pin and the second alignment pin are configured and oriented to define a resection surface of reference through which the bone is to be resected (Appellants' specification at page 12, lines 12-16 and FIGs.. 2-4) and the wire saw is configured to be inserted through at least one of the incisions (Appellants' specification at page 12, lines 19-20 and FIG. 4) and for extending at least from the first alignment pin to the second alignment pin to be simultaneously guided by the first and second alignment pins while being moved to resect the bone (Appellants' specification at page 12, line 19 through page 20, line 5 and FIGs. 4-5).

Claim 30

An apparatus for resecting a bone comprising:

a wire saw (Appellants' specification at page 29, lines 9-12 and FIG. 26);

a saw driver (Appellants' specification at page 28, lines 12-14 and FIG. 25)

including a shaft adapted to be driven by a rotary drill (Appellants' specification at page 28, lines 14-17 and FIG. 25) to rotate about an axis (Appellants' specification at page 29, lines 13-16 and FIG. 26), a body coupled at a first end to the shaft to be rotated thereby about the axis (Appellants' specification at page 28, lines 14-16 and FIG. 25), the body including a second end formed to include teeth adapted to cut through the bone (Appellants' specification at page 28, lines 19-21 and FIG. 25) and a wall extending between the first end and the second end (Appellants' specification at page 28, lines 17-19 and FIG. 25), the wall being formed to include a driver surface for engaging the wire saw and driving the same during rotation of the body (Appellants' specification at page 29, lines 3-8 and FIG. 25).

Claim 37

A method of resecting a portion of a bone comprising:

inserting a first alignment pin into a bone through a first incision (Appellants' specification at page 12 lines 9-14 and FIG. 4);

inserting a second alignment pin into the bone through a second incision (Appellants' specification at page 12 lines 9-14 and FIG. 4);

inserting at least a portion of a wire saw through the first incision (Appellants' specification at page 12, lines 19-20 and FIG. 4);

guiding the at least a portion of a wire saw with the first alignment pin and the second alignment pin (Appellants' specification at page 12, line 19 through page 20, line 5 and FIGs. 4-5);

resecting a first portion of the bone with the wire saw while simultaneously guiding the wire saw with both the first alignment pin and the second alignment pin (Appellants' specification at page 12, line 19 through page 20, line 5 and FIGs. 4-5); and

removing the resected first portion of the bone (Appellants' specification at page 13, lines 78-10 and FIGs. 4-5).

2) For each independent claim involved in the appeal and for each dependent claim argued separately under the provisions of 37 CFR 41.37(c)(1)(vii), *every means plus function and step plus function* as permitted by 35 U.S.C. 112, sixth paragraph, must be identified and the structure, material, or acts described in the specification as corresponding to each claimed function must be set forth with reference to the specification by page and line number, and to the drawing, if any, by reference characters.

None of the independent claims and none of the dependent claims argued separately include a means plus function or step plus function.

(6) GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 37-44 stand withdrawn under 37 C.F.R. 1.142(b) as allegedly being drawn to an invention independent or distinct from the invention originally claimed.

Claim 30 stands rejected as being anticipated under 35 U.S.C. §102(b) by U.S. Patent No. 5,077,902 to Hitt (hereinafter “Hitt”).

Claims 1-18 and 30-36 stand rejected as being obvious under 35 U.S.C. §103(a) over U.S. Patent No. 4,421,112 to Mains et al. (hereinafter “Mains”) in view of U.S. Patent Publication No. US 2006/0030854 A1 of Haines (hereinafter “Haines”).

Claims 19-21 stand rejected as being obvious under 35 U.S.C. §103(a) over Mains.

(7) ARGUMENT

The Restriction Requirement Was Improper

Disagreement with the exercise of discretion by an Examiner in making a restriction requirement is, of course, a matter for petition to the Director. Whether or not the statutory basis for making a restriction requirement exists, however, is a matter of law properly appealed to the Board of Patent Appeals and Interferences. In the present case, the Examiner required a restriction of the claims and withdrew claims 37-44 from examination citing to 37 CFR 1.142(b) for authority. (Office Action at page 2). The Examiner’s restriction requirement does not satisfy the statutory prerequisite of 35 U.S.C. 121 and the restriction requirement should be reversed by the Board.

1. The Statutory Requirement for Restriction

The statutory basis for the restriction practice of the U.S. Patent and Trademark Office (the PTO) is set forth in 35 U.S.C. 121. Specifically, 35 U.S.C. 121 states that “[i]f two or more independent and distinct inventions are claimed in one application, the

Director may require the application to be restricted to one of the inventions.” Thus, while it is not mandatory for the PTO to restrict applications to a single invention, the statute specifically authorizes such restriction at the discretion of the Director. Before any such discretion is exercised, however, the statute requires that there be “two or more independent and distinct inventions”.

Therefore, the existence of two or more distinct inventions in the claims is a statutory predicate for any restriction requirement. “[W]hether the requirements of section 121 have been satisfied is a question of law” that is reviewed *de novo* based upon a review of the relevant materials. *Bristol-Myers Squibb Co. v. Pharmachemie*, 361 F.3d 1343, Fn 1, 70 USPQ2d 1097, Fn 1 (Fed. Cir. 2004).

2. The Test for Distinctness

The test for distinctness as stated in the MPEP at section 806.05(c) is as follows:

The inventions are distinct if it can be shown that a combination as claimed:

- (A) does not require the particulars of the subcombination as claimed for patentability (to show novelty and unobviousness), and
- (B) the subcombination can be shown to have utility either by itself or in other and different relations.

When these factors cannot be shown, such inventions are not distinct.

The “test” is somewhat misleading in that the first proposition is assumed for the purposes of making a restriction determination. (MPEP 806.02). Thus, a claim drawn to a subcombination is distinct if it has utility separate from the combination of the combination claim.

3. The Allegation of Separate Utility is Specious

The Examiner has withdrawn a previously proposed specious allegation of utility and provided a different, although equally specious, argument. The Examiner now proposes that different utility is provided because “the apparatus as claimed can be used in a different process, e.g., in a method that doe (sic) not require the removal of a resected first portion of bone.” (Office Action at page 2). The allegation is specious.

Specifically, claim 37, from which claims 38-44 depend, recites:

A method of resecting a portion of a bone comprising:
 inserting a first alignment pin into a bone through a first incision;
 inserting a second alignment pin into the bone through a second incision;
 inserting at least a portion of a wire saw through the first incision;
 guiding the at least a portion of a wire saw with the first alignment pin and the second alignment pin;
 resecting a first portion of the bone with the wire saw while simultaneously guiding the wire saw with both the first alignment pin and the second alignment pin; and
 removing the resected first portion of the bone.

Therefore, the basis for the Examiner’s restriction requirement is that a limitation of “removing the resected first portion of the bone” is found in claim 37, but not in claims 1 or 30 (the other independent claims). The Examiner thus contends that the limitation of removing a resected bone changes the method of claim 37 to a method “independent and distinct” from the invention of claims 1 and 30.

The Examiner has not provided any explanation as to why a claim that is drafted *more narrowly* (with respect to the limitation at issue) than a claim currently under examination, can possibly be independent or distinct from the broader claim. Moreover, the Examiner’s argument is premised upon an assumption that one of ordinary skill in the art, upon resecting a portion of a bone, would not remove the resected portion. The Examiner has failed to provide any facts to support such an assumption.

4. Conclusion

The restriction requirement levied by the Examiner is specious. A claim that is narrower than a claim currently under examination cannot reasonably be held to be independent and distinct from the broader claim. Therefore, the statutory predicate for restriction has not been met and the arbitrary restriction requirement and withdrawal of claims 37-44 must be reversed.¹

Claim 30 is Not Anticipated by Hitt

Claim 30 stands rejected under 35 U.S.C. §102(b) as being anticipated by Hitt. (Office Action at page 3). Hitt does not teach or disclose each element of the claim. Therefore, the rejection should be overturned.

Discussion re: Patentability of Claim 30

1. Claim 30

Claim 30 recites the following:

An apparatus for resecting a bone comprising:
a wire saw;
a saw driver including a shaft adapted to be driven by a rotary drill to rotate about an axis, a body coupled at a first end to the shaft to be rotated thereby about the axis, the body including a second end formed to include teeth adapted to cut through the bone and a wall extending between the first end and the second end, the wall being formed to include a driver surface for engaging the wire saw and driving the same during rotation of the body.

¹ Additionally, restriction is only allowed when the Examiner can show why failing to make the restriction requirement would be a “serious burden” on the Examiner (MPEP 808.02). The Examiner failed to allege any additional burden in examining claims 37-44, much less a “serious burden” as required by the MPEP. Therefore, even if separate inventions were claimed, the restriction would be improper.

Accordingly, claim 30 recites a driver that is separate from a wire saw to include bone cutting teeth on one end of a body. Additionally, the body drives the wire saw by rotation.

2. The Examiner's Rejection Lacks the Requisite Clarity

As an initial matter, the Examiner has rejected claim 30 under 35 U.S.C. §102(b) as being anticipated by Hitt. The Examiner has alleged that the body with bone cutting teeth recited in claim 30 is disclosed in Hitt at “col. 2, lines 38-68 and col. 3, lines 53-61.” (Office Action at page 3). The Examiner has failed to provide a clear rejection. 37 CFR 1.104 requires that:

In rejecting claims for want of novelty or for obviousness, the examiner must cite the best references at his or her command. When a reference is complex or shows or describes inventions other than that claimed by the applicant, the particular part relied on must be designated as nearly as practicable. *The pertinence of each reference, if not apparent, must be clearly explained* and each rejected claim specified. (Emphasis added).

The rejection, provided for the first time in the Office Action, fails to provide any explanation of the pertinence of the passages relied upon. Such an explanation is warranted since the two passages are directed to two separate embodiments. Specifically, col. 2, lines 38-68 is directed to the embodiment of FIG. 1 while col. 3, lines 53-61 is directed to the embodiment of FIGs. 2 and 3. The Examiner has failed to explain if the bone cutting teeth on one end of a body as recited in claim 30 is to be found in the embodiment of FIG. 1 or the embodiment of FIGs. 2 and 3.

The remainder of the Examiner's rejection fails to provide any insight into the pertinence of Hitt. For example, while the Examiner relies upon the wire saw 24 and

body 8 of the embodiment of FIG. 1 (Office Action at page 3), the Examiner also cites to the embodiment of FIGs. 2 and 3 for the “shaft 23a” which apparently is alleged to disclose the “shaft” recited in claim 30. Thus, while the Examiner is apparently rearranging various components found in the various embodiments of Hitt to allegedly arrive at the device recited in the claim, the Examiner has failed to identify which embodiment of Hitt is alleged to disclose the bone cutting teeth on one end of a body as recited in claim 30.

Under 37 CFR 1.104, the Examiner is required to explain the pertinence of each reference if the pertinence is not apparent. Not only has the Examiner failed to explain how any of the “driver bodies” of Hitt disclose the “teeth” recited in claim 30, but furthermore, the Examiner has failed to even identify *which embodiment* of Hitt allegedly discloses the “teeth” recited in claim 30. Therefore, the Examiner’s rejection of claim 30 based upon Hitt does not comply with 37 CFR 1.104 and the Board of Appeals is respectfully requested to reverse this rejection of claim 30.

3. Picking and Choosing of Elements is Not Proper

Moreover, “anticipation” is not some sort of contest to see if an Examiner bent upon disallowing a claim can point to a piece of prior art that has the same number of surfaces and holes as a claimed invention and conclude that the claimed invention is anticipated. As noted by the predecessor to the Federal Circuit:

[T]he [prior art] reference must clearly and unequivocally disclose the claimed [invention] or direct those skilled in the art to the [invention] without any need for picking, choosing, and combining various disclosures not directly related to each other by the teachings of the cited references.

In re Arkley, 433 F.2d 586, 587, 172 USPQ 524, 526 (CCPA 1972).

Therefore, the Examiner cannot merely point to different embodiments within Hitt, identify different components, and conclude that the claim is anticipated. Rather, anticipation requires that the *reference* provide the basis for mixing and matching components disclosed therein.

Accordingly, because the rejection of claim 30 is based upon a selection of different components from different embodiments of Hitt, it is incumbent upon the Examiner to identify where Hitt teaches that the different embodiments be combined in the manner identified by the Examiner. The Examiner has failed to provide any such teaching in Hitt.

Therefore, the Examiner has failed make a *prima facie* showing of anticipation of claim 30 based upon Hitt and the Board of Appeals is respectfully requested to reverse this rejection of claim 30.

4. Hitt Does Not Describe Teeth on a Body Separate from a Wire Saw

After a careful review of Hitt, the Appellants did discover a reference to “teeth.” To the extent the Examiner intended to allege that the “teeth” in Hitt disclose bone cutting teeth on one end of a body as recited in claim 30, the Examiner has mischaracterized Hitt.

Specifically, Hitt uses the word “teeth” at two passages. At page 2, lines 58-60, Hitt states that “[t]he wire saw 24 achieves its cutting action with a multiplicity of cutting edges of hardened carbide teeth embedded around its circumference.” While this sentence is within the passage cited by the Examiner, the sentence clearly states that the

teeth *are on the wire saw*. Obviously, a wire saw cannot be a device separate from itself. Therefore, this passage of Hitt describing the wire saw itself does not disclose a *driver* for the wire saw.

The second passage of Hitt that uses the word “teeth” is found at column 4, lines 60-62 which states “[t]he saw used in the invention has a 360° cutting surface which may be made of stainless steel strands with embedded carbide teeth.” Thus, once again Hitt is describing the *wire saw*, not the device used to drive the wire saw.

Therefore, because the “teeth” of Hitt are located on the wire saw, the teeth of Hitt cannot be teeth located on the body of a driver of a wire saw as recited in claim 30. It is axiomatic that anticipation of a claim under 35 U.S.C. § 102 is proper only if the prior art reference discloses each and every element of the claim. Since none of the embodiments of Hitt disclose a driver with a “body including a second end formed to include teeth” as recited in claim 30, Hitt does not anticipate Appellants’ claim 30. Accordingly, the Board of Appeals is respectfully requested to overturn the rejection of claim 30.

5. The Body and Wire Saw are Separate

The Examiner now argues that “it is not required for [the wire saw and the teeth] to be separate. All that is required in reference to the teeth is that “the body including a second end formed to include teeth”.” (Office Action at page 7). The Examiner’s position is contrary to established law.

Specifically, the Federal Circuit has stated:

To anticipate a claim, a single prior art reference must expressly or inherently disclose each claim limitation.... But disclosure of each element is not quite enough—this court has long held that “[a]nticipation requires

the presence in a single prior art disclosure of all elements of a claimed invention arranged as in the claim.

Finisar Corp. v. DirecTV Group, Inc., 523 F.3d 1323, 1334, 86 USPQ2d 1609, 1618

(Fed. Cir. 2008)(internal citations omitted)(emphasis in original). Accordingly, it is not enough that the device of Hitt have “teeth”. The teeth must be arranged as in the claim to anticipate the claim.

Claim 30 requires the “teeth” to be on the “body” of a saw driver. Moreover, the claim requires the saw driver to be arranged for “engaging the wire saw and driving the same during rotation of the body”. Thus, the saw driver engages the wire saw and drives the wire saw as the body rotates. Accordingly, because the teeth are formed in the body portion of the saw driver, and the saw driver drives the wire saw, the teeth cannot be part of the wire saw.

Therefore, because the arrangement set forth in the claim requires teeth on a saw driver which is used to drive a wire saw, the teeth of Hitt, which are on the wire saw, cannot anticipate the teeth of claim 30.

6. Two Bone Shaping Components Are Required

Finally, the Examiner states that “Hitt clearly shows teeth formed in a second end (where the wire saw is).” (Office Action at page 7). While “clarity” may be in the eye of the beholder, whatever is shown in the “second end” of the Hitt device, they are not “teeth” as that term is used in the Applicants’ specification.

Specifically, “teeth” are identified as devices which allow a bone to be shaped. (See, e.g. Applicants’ specification at page 28, lines 19-21, page 29, lines 20-23, and FIGs. 25-29). Thus, while the wire saw is cutting bone, the teeth of the driver is also

cutting bone. Thus, in addition to driving a bone shaping element, the saw driver is also a bone shaping element. Nothing in the device of Hitt hints at a component other than the “saw” (33 or 71, depending upon the embodiment) shaping bone.

Therefore, the term “teeth” as used in the specification and the claims requires a bone shaping component. Consequently, because claim 30 requires both a wire saw and a saw driver with a bone shaping element, and because Hitt only discloses a wire saw, Hitt cannot anticipate claim 30.

7. Conclusion

Therefore, for any of the reasons set forth above, the Examiner has failed to provide an adequate rejection of claim 30 under 35 U.S.C. §102 based upon elements found in the prior art. Accordingly, the Board is respectfully requested to overturn the rejection of claim 30 based upon Hitt.

Claims 1-18 and 30-36 are Not Obvious

Discussion Regarding Claim 1

The Examiner has rejected claim 1 under 35 U.S.C. §103(a) as being obvious based upon a combination of Mains and Haines. (Office Action at page 4). In so doing, the Examiner has acknowledged that Mains fails to disclose each element of claim 1. (Office Action at page 5). The Examiner has failed, however, to properly allege a *prima facie* case of obviousness. Therefore, the rejection should be reversed.

As noted in chapter 706.02(k) of the MPEP,

The initial burden is on the examiner to provide some suggestion of the desirability of doing what the inventor has done. "To support the

conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985).

Since the Office Action is devoid of any specific teaching of either Mains or Haines for combining the various devices disclosed therein, the Examiner is required to provide "a convincing line of reasoning." The line of reasoning provided by the Examiner is that:

It would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the device of Mains having a wire saw, in view of Haines, in order to reduce implant placement errors in order to create more reproducible and consistently excellent clinical results that (sic) is less dependent on manual skills of the surgeon.

(Office Action at page 5, citing to paragraph 13 of Haines).

The Examiner's line of reasoning is based upon a premise that some shortcoming of Mains can be ameliorated by the device of Haines. The Examiner has failed, however, to identify any such deficiency of Mains. Moreover, Haines does not identify any problem with the Mains device that is corrected or improved upon by incorporation of the teaching of Haines.

Therefore, while a benefit in a proposed combination is a valid motivation for making the proposed modification, there must be some link between the proposed modification and the alleged benefit. Mains, however, discloses a saw guide 34 which provides a physical platform upon which a saw is placed. (Mains at column 5, lines 45-53).

Specifically, at column 5, lines 44-53, Mains states:

The saw guide plate 34 is then placed over one pair of pins 12 (FIG. 3) with the pins 12 in its openings 36 and its guide surface 38 adjacent the other pair of pins 12; and a side surface 51 of an oscillating saw blade 52 driven by a suitable motor (not shown) is guided first along the guide surface 38 and then along the surfaces of both guide pins 12 to make a cut along the pins 12 from the outer surface of the tibia 40 to adjacent the intersection of the first and second planes defined by the pins 12. After such a cut via the use of the guide plate 34 is made along the planes defined by the adjacent surfaces of both sets of pins 12, a wedge-shaped segment 54 of the tibia 40 is removed (FIG. 4) and any excess bone tissue at the apex of the wedge-shaped groove formed by the saw blade 52 is removed through the use of an osteotome or chisel.

Thus, the plate is precisely positioned by the guide pins 12 (Mains at column 5, lines 45-53). The Examiner has failed to provide any insight into how the system of Mains would be improved by incorporation of the saw of Haines. Thus, one of ordinary skill in the art would not be motivated to make the proposed modification. Accordingly, the line of reasoning provided by the Examiner is not convincing.

Because the Examiner has failed to provide the explanation for the proposed combination required by MPEP 2142, the Examiner has failed to present a *prima facie* case of obviousness and the Board is respectfully requested to overturn the rejection of claim 1 based upon the combination of Mains and Haines.

Discussion Regarding Claim 2

1. Claim 2

Claim 2 recites the following:

The system of claim 1, wherein the first alignment pin has a length sufficient that the first alignment pin extends completely through the bone with one tip extending beyond the bone on a first side and the second tip extending beyond the bone on the opposite side and the second alignment pin has a length sufficient that the second alignment pin extends completely through the bone with one tip extending beyond the bone on a first side and the second tip extending beyond the bone on the opposite side.

Accordingly, claim 2 recites an alignment pin sized to extend completely through a bone into which the alignment pin is inserted.

2. The Discussion of Claim 1 Applies

As an initial matter, claim 2 depends from claim 1. The Examiner rejected claim 2 based upon the same combination and line of reasoning that was discussed above with respect to claim 1. (Office Action at pages 4-5). Accordingly, claim 2 is patentable over the prior art for at least the same reasons as those set forth above in connection with claim 1.

3. Mains Does Not Teach a Pin As Claimed

The Examiner has alleged that Mains discloses a pin sized to extend completely through a bone into which the alignment pin is inserted. (Office Action at page 4). The Examiner has mischaracterized Mains.

Specifically, the Examiner relies upon the teaching of Mains at column 4, lines 27-33 and reference number 12 for teaching the size of pin claimed. (Office Action at page 4). Column 4, lines 27-33 of Mains states:

The first predetermined distance between tips of the end surface 14 and the shoulders or marks 16 on the guide pins 12 and this second predetermined distance have a known relationship to each other to facilitate use of the assembly 10, which relationship in the illustrated assembly is that both distances are the same.

This passage thus describes a ratio between a central location of the guide pins 12 and the end points of the guide pins 12. It is a fundamental truth that a ratio is a dimensionless factor which does not include any basis, in and of itself, upon which to form a

determination as to the absolute length of an object. Accordingly, there is no support in Mains for the Examiner's characterization.

Moreover, the Examiner's proposition is incompatible with the teaching of Mains. Mains is directed toward an assembly and guide which are used to remove a wedge of bone to treat varus or valgus deformities. (Mains at Abstract and column 1, lines 13-19). To this end, the guide pins 12, which are used to guide a saw (column 5, lines 45-54) positioned within a bone so as to meet at a location within the bone that leaves a portion of the bone intact. (See, e.g., Mains at column 5, lines 60-65 and FIG. 5). Accordingly, the pins 12 are sized to meet within the bone, as clearly shown in FIG. 3, not to extend beyond the bone. If the pins 12 extended beyond the bone, nothing would prevent the operator from cutting completely through the bone.

Therefore, because Mains does not disclose a pin sized to extend completely through a bone into which the alignment pin is inserted, even if Mains and Haines are combined in the manner proposed by the Examiner, the proposed modification fails to arrive at the invention of claim 2. Accordingly, a *prima facie* case of obviousness under 35 U.S.C. § 103 has not been sufficiently alleged with regard to the invention of claim 2 and the Board of Appeals is respectfully requested to reverse this rejection of claim 2.

4. Conclusion

Therefore, for any of the reasons set forth above, a *prima facie* case of obviousness has not been established with respect to the invention of claim 2 and the Board of Appeals is respectfully requested to reverse the rejection of claim 2.

Discussion Regarding Claims 3-5, 8-9 and 12

Claims 3-5, 8-9 and 12 each depend directly or by way of one or more intermediate claims from claim 2. The Examiner rejected claims 3-5, 8-9 and 12 under 35 U.S.C. §103(a) as being obvious based upon a combination of Mains and Haines using the line of reasoning discussed above with respect to claim 2. (Office Action at page 5). Therefore, for at least the same reasons set forth above with respect to claim 2, each of claims 3-5, 8-9 and 12 are patentable over the prior art cited by the Examiner and the Board is respectfully requested to reverse the rejection of claims 3-5, 8-9 and 12.

Discussion Regarding Claim 6

1. Claim 6

Claim 6 recites the following:

The system of claim 4 wherein the guide block is formed to include a first saw guide and a second saw guide said first and second saw guides being positioned to guide the saw along the resection plane of reference when the saw is received in the saw guides.

Accordingly, claim 6 recites a guide block with *two* saw guides which guide a saw along the plane defined by the guide pins. Claim 4 further requires the guide block to include a guide hole for a drill.

2. The Discussion of Claim 1 Applies

As an initial matter, claim 6 depends from claim 4 and other intermediate claims. The Examiner rejected claim 6 based upon the same combination and line of reasoning that was discussed above with respect to claim 4. (Office Action at pages 4-5). Accordingly, claim 6 is patentable over the prior art for at least the same reasons as those set forth above in connection with claim 4.

3. Mains Does Not Teach a Block With Drill Guides and Saw Guides

The Examiner has alleged that Mains discloses a guide block with guide holes for a drill and that the guide block has two saw guides. (Office Action at page 4). The Examiner has mischaracterized Mains.

Specifically, the Examiner relies upon the teaching of Mains at column 2, lines 51-54 for teaching a “guide block.” (Office Action at page 4). The Examiner then states that “[t]he guide block is formed to include a first and a second guide (sic) saw guide.” (Office Action at page 4). The Examiner offers as evidence of this proposal a marked-up FIG. 1. (Office Action at page 5). The alleged “saw guides” are merely flat surfaces of the guide block 20. Mains, however, does not hint, suggest, or infer that the guide block 20 is used to guide a saw. Rather, after placing the guide pins 12, the block 20 is broken or removed (Mains at column 5, lines 35-44) and a separate saw guide plate 34 is used to guide a saw (Mains at column 5, lines 45-54).

Obviousness, like anticipation, is not defined as a test to see if an Examiner bent upon disallowing a claim can point to one or more pieces of prior art to identify the same number of surfaces and holes in the prior art as there are components in a claimed invention and conclude that the claimed invention is obviousness. Rather, obviousness is adjudged based upon whether or not “differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” 35 U.S.C. 103.

Thus, the Examiner is required to explain why one of ordinary skill in the art, upon viewing the (pin) guide block 20 of Mains (FIG. 1) which is used to position the pins 12 (FIG. 2), and upon viewing the saw guide plate 34 of Mains which is positioned on the guide pins 12 and used to guide a saw (FIG. 3), would consider some apparently arbitrarily formed flat surfaces of the pin guide to be a saw guide. Nothing within Mains, Haines, or any other cited art provides the leap in reasoning required to identify any portion of the pin guide block 20 of Mains as a saw guide. Moreover, the Examiner has failed to provide any rational explanation for the allegation that a portion of the pin guide block 20 of Mains is a saw guide.

Therefore, because Mains does not disclose a single guide block that incorporates both drill guide holes and saw guides, even if Mains and Haines are combined in the manner proposed by the Examiner, the proposed modification fails to arrive at the invention of claim 6. Accordingly, a *prima facie* case of obviousness under 35 U.S.C. § 103 has not been alleged with regard to the invention of claim 6 and the Board of Appeals is respectfully requested to reverse this rejection of claim 6.

4. Mains Does Not Teach a Block With Drill Guides and Saw Guides

Additionally, as discussed above, claim 6 recites a block with *two* saw guides which guide a saw along the “resection plane of reference.” The “resection plane of reference” of Mains is defined by the bores 22 (Mains at column 4, lines 54-69). The “saw guides” proposed by the Examiner, however, define a plane that is perpendicular to the plane defined by the bores 22. Guiding a saw along a plane perpendicular to a

resection plane of reference is not the same as guiding a saw along the resection plane of reference.

Therefore, because Mains does not disclose a guide block that incorporates two saw guides, much less two saw guides which guide a saw along the resection plane of reference, even if Mains and Haines are combined in the manner proposed by the Examiner, the proposed modification fails to arrive at the invention of claim 6. Accordingly, a *prima facie* case of obviousness under 35 U.S.C. § 103 has not been alleged with regard to the invention of claim 6 and the Board of Appeals is respectfully requested to reverse this rejection of claim 6.

5. Conclusion

Therefore, for any of the reasons set forth above, a *prima facie* case of obviousness has not been established with respect to the invention of claim 6 and the Board of Appeals is respectfully requested to reverse the rejection of claim 6.

Discussion re: Patentability of Claims 7, 10 and 11

Claim 7 depends from and incorporates all the limitations of claim 6. Claim 10, from which claim 11 depends, recites a guide block which includes two saw guides which guide a saw along the resection plane of reference. Claim 10 further depends from claim 8 through claim 9, and claim 8 requires the guide block to include drill guide holes. Accordingly, claims 7, 10 and 11 incorporate the limitations discussed above with respect to claim 6 and are patentable over the prior art for at least the same reasons as those set

forth above in connection with claim 6. Therefore, the Board of Appeals is respectfully requested to reverse this rejection of claims 7, 10 and 11.

Discussion Regarding Claim 13

1. Claim 13

Claim 13 recites the following:

The system of claim 2 and further comprising a saw driver configured to be guided by the first pin through the bone and to drive the saw guided by the saw driver and the second alignment pin through the bone.

Accordingly, claim 13 recites a saw driver which 1) is guided by a pin, and 2) guides the wire saw in conjunction with a second pin.²

2. The Discussion of Claim 1 Applies

As an initial matter, claim 13 depends from claim 2. The Examiner rejected claim 13 based upon the same combination and line of reasoning that was discussed above with respect to claim 2. (Office Action at pages 4-5). Accordingly, claim 13 is patentable over the prior art for at least the same reasons as those set forth above in connection with claim 2.

² The Examiner states that the rejection of claim 13 has been withdrawn. (Office Action at page 6). Accordingly, claims 13-16 should apparently only be objected to. The Office Action Summary, however, identifies claims 13-16 as being rejected. Additionally, page 4 of the Office Action identifies claims 13-16 as being rejected. Accordingly, claims 13-16 are discussed herein.

3. Haines Does Not Teach a Driver as Claimed

The Examiner has admitted that Mains does not disclose a driver as recited in claim 13. (Office Action at page 5). The Examiner fails, however, to allege that any such driver is disclosed in Haines. (Office Action at page 5).

Therefore, because Mains does not disclose a driver which 1) is guided by a pin, or that 2) guides the wire saw in conjunction with a second pin, and because the Examiner has failed to even allege any such device in Haines, even if Mains and Haines are combined in the manner proposed by the Examiner, the proposed modification fails to arrive at the invention of claim 13. Accordingly, a *prima facie* case of obviousness under 35 U.S.C. § 103 has not been alleged with regard to the invention of claim 13 and the Board of Appeals is respectfully requested to reverse this rejection of claim 13.

4. Conclusion

Therefore, for any of the reasons set forth above, a *prima facie* case of obviousness has not been established with respect to the invention of claim 13 and the Board of Appeals is respectfully requested to reverse the rejection of claim 13.

Discussion Regarding Claim 14

1. Claim 14

Claim 14 recites the following:

The system of claim 13 wherein the saw driver includes a shaft adapted to be driven by a rotary drill to rotate about an axis, a body coupled at a first end to the shaft to be rotated thereby about the axis, the body including a second end formed to include teeth adapted to cut through the bone and a wall extending between the first end and the second end, the wall being formed to include a driver surface for engaging the wire saw and driving the same during rotation of the body.

Accordingly, claim 14 recites a body of a driver that includes bone cutting teeth.

2. The Discussion of Claim 13 Applies

As an initial matter, claim 14 depends from claim 13. The Examiner rejected claim 13 based upon the same combination and line of reasoning that was discussed above with respect to claim 13. (Office Action at pages 4-5). Accordingly, claim 14 is patentable over the prior art for at least the same reasons as those set forth above in connection with claim 13.

3. A Driver Body with Teeth Has Not Been Alleged

Moreover, as discussed above, claim 14 recites a body of a driver that includes bone cutting teeth. The Examiner has failed to identify any such limitation in either Mains or Haines. Therefore, because the Examiner has failed to allege any prior art as teaching, disclosing or suggesting a body of a driver that includes bone cutting teeth as recited in claim 14, a *prima facie* case of obviousness under 35 U.S.C. § 103 has not been properly alleged and the Board of Appeals is respectfully requested to reverse this rejection of claim 14.

4. Conclusion

Therefore, for any of the reasons set forth above, a *prima facie* case of obviousness has not been established with respect to the invention of claim 14 and the Board of Appeals is respectfully requested to reverse the rejection of claim 14.

Discussion Regarding Claim 15

1. Claim 15

Claim 15 recites the following:

The system of claim 14 wherein the body includes a cavity formed in the second end and extending into the body toward the first end, the cavity being sized to receive the first alignment pin therein.

Accordingly, claim 15 recites a body of a driver that includes a cavity for receiving an alignment pin.

2. The Discussion of Claim 14 Applies

As an initial matter, claim 15 depends from claim 14. The Examiner rejected claim 15 based upon the same combination and line of reasoning that was discussed above with respect to claim 14. (Office Action at pages 4-5). Accordingly, claim 15 is patentable over the prior art for at least the same reasons as those set forth above in connection with claim 14.

3. A Driver Body with a Cavity Has Not Been Alleged

Moreover, as discussed above, claim 15 recites a body of a driver that includes a cavity for receiving an alignment pin. The Examiner has failed to identify any such limitation in the cited art. Therefore, because the Examiner has failed to allege any prior art as teaching, disclosing or suggesting a body of a driver that includes a cavity for receiving an alignment pin as recited in claim 15, a *prima facie* case of obviousness under 35 U.S.C. § 103 has not been properly alleged and the Board of Appeals is respectfully requested to reverse this rejection of claim 15.

4. Conclusion

Therefore, for any of the reasons set forth above, a *prima facie* case of obviousness has not been established with respect to the invention of claim 15 and the Board of Appeals is respectfully requested to reverse the rejection of claim 15.

Discussion Regarding Claim 16

1. Claim 16

Claim 16 recites the following:

The apparatus of claim 15 wherein the wire saw forms a loop and the driver surface comprises an annular groove formed in the wall.

Accordingly, claim 16 recites a driver surface that includes an annular groove.

2. The Discussion of Claim 15 Applies

As an initial matter, claim 16 depends from claim 15. The Examiner rejected claim 16 based upon the same combination and line of reasoning that was discussed above with respect to claim 15. (Office Action at pages 4-5). Accordingly, claim 16 is patentable over the prior art for at least the same reasons as those set forth above in connection with claim 15.

3. A Driver Surface with an Annular Groove Has Not Been Alleged

Moreover, as discussed above, claim 16 recites a driver surface that includes an annular groove. The Examiner has failed to identify any such limitation in the cited art. Therefore, because the Examiner has failed to allege any prior art as teaching, disclosing or suggesting a driver surface that includes an annular groove as recited in claim 16, a

prima facie case of obviousness under 35 U.S.C. § 103 has not been properly alleged and the Board of Appeals is respectfully requested to reverse this rejection of claim 16.

4. Conclusion

Therefore, for any of the reasons set forth above, a *prima facie* case of obviousness has not been established with respect to the invention of claim 16 and the Board of Appeals is respectfully requested to reverse the rejection of claim 16.

Claim 17 is Not Obvious

Discussion Regarding Claim 17

1. Claim 17

Claim 17 recites the following:

The system of claim 1 and further comprising a saw frame including a shaft adapted to be coupled to an oscillator, a finger coupled to the shaft at one end for movement between a retracted position wherein a second end of the finger is adjacent the shaft and an extended position wherein the second end is displaced from the shaft and wherein the wire saw is coupled to the shaft and the finger adjacent the second end to be tensioned between the shaft and the second finger when the second finger is in the extended position.

Accordingly, claim 17 recites a frame with a movable tensioning finger.

2. The Discussion of Claim 1 Applies

As an initial matter, claim 17 depends from claim 1. The Examiner rejected claim 17 based upon the same combination and line of reasoning that was discussed above with respect to claim 1. (Office Action at pages 4-5). Accordingly, claim 17 is patentable over the prior art for at least the same reasons as those set forth above in connection with claim 1.

3. A Movable Tensioning Finger Has Not Been Alleged

The Examiner has alleged that Haines discloses fingers providing tension. (Office Action at page 5). The Examiner has mischaracterized Haines.

Specifically, the Examiner relies solely upon FIG. 4 of Haines for disclosing a “movable” finger. (Office Action at page 5). FIG. 4 of Haines discloses a device that includes a “constant tension capstan drive.” The capstan drive, however, is not configured to move between a retracted position and an extended position. Rather, tension is provided, apparently, by the shape of the capstan. In fact, nothing in the device is described as being movable between two different positions (see, e.g., Haines at paragraph 25).

Therefore, because the capstan device of FIG. 4 does not provide tension by movement from a retracted position to an extended position as required by claim 17, even if Mains and Haines are combined in the manner proposed by the Examiner, the proposed modification fails to arrive at the invention of claim 17. Accordingly, a *prima facie* case of obviousness under 35 U.S.C. § 103 has not been alleged with regard to the invention of claim 17 and the Board of Appeals is respectfully requested to reverse this rejection of claim 17.

4. Conclusion

Therefore, for any of the reasons set forth above, a *prima facie* case of obviousness has not been established with respect to the invention of claim 17 and the Board of Appeals is respectfully requested to reverse the rejection of claim 17.

Discussion Regarding Claim 18

1. Claim 18

Claim 18 recites the following:

The system of claim 17 wherein the second finger is formed from a shape memory alloy.

Accordingly, claim 18 recites a frame with a tensioning finger made from shape memory alloy.

2. The Discussion of Claim 17 Applies

As an initial matter, claim 18 depends from claim 17. The Examiner rejected claim 18 based upon the same combination and line of reasoning that was discussed above with respect to claim 17. (Office Action at pages 4-5). Accordingly, claim 18 is patentable over the prior art for at least the same reasons as those set forth above in connection with claim 17.

3. A Memory Shape Tensioning Finger Has Not Been Alleged

Moreover, as discussed above, claim 18 recites a tensioning finger made from shape memory alloy. The Examiner has failed to identify any such limitation in the cited art. Therefore, because the Examiner has failed to allege any prior art as teaching, disclosing or suggesting a tensioning finger made from shape memory alloy as recited in claim 18, a *prima facie* case of obviousness under 35 U.S.C. § 103 has not been properly alleged and the Board of Appeals is respectfully requested to reverse this rejection of claim 18.

4. Conclusion

Therefore, for any of the reasons set forth above, a *prima facie* case of obviousness has not been established with respect to the invention of claim 18 and the Board of Appeals is respectfully requested to reverse the rejection of claim 18.

Claims 19-21 Are Not Obvious

Discussion Regarding Claim 19

1. Claim 19

Claim 19 recites the following:

The system of claim 1 wherein the first and second alignment pins and the wire saw are configured to be inserted through incisions less than six centimeters long.

Accordingly, claim 19 recites a wire saw configured to be inserted through small incisions.

2. A Wire Saw Has Not Been Alleged

Claim 19 was rejected based upon the proposition that Mains disclosed each limitation of claim 19 with the exception of the sizing of the wire saw and alignment pins for insertion through small incision. (Office Action at page 5). The Examiner has previously admitted, however, that Mains fails to disclose a wire saw. (Office Action at page 5). Moreover, the Appellants have found no disclosure, teaching or suggestion in Mains of a wire saw.

Therefore, because the Examiner has failed to identify any disclosure, teaching or suggestion in Mains of a wire saw as recited in claim 19, a *prima facie* case of

obviousness under 35 U.S.C. § 103 has not been properly alleged and the Board of Appeals is respectfully requested to reverse this rejection of claim 19.

Discussion re: Patentability of Claims 20-21

Claims 20-21 depend from and incorporate all the limitations of claim 19. Claims 20-21 were rejected based upon the same prior art discussed above with respect to claim 19. Accordingly, claims 20-21 are patentable over the prior art for at least the same reasons as those set forth above in connection with claim 19 and the Board of Appeals is respectfully requested to reverse this rejection of claims 20-21.

Discussion Regarding Claim 30

1. Claim 30

Claim 30 recites the following:

An apparatus for resecting a bone comprising:

a wire saw;
a saw driver including a shaft adapted to be driven by a rotary drill to rotate about an axis, a body coupled at a first end to the shaft to be rotated thereby about the axis, the body including a second end formed to include teeth adapted to cut through the bone and a wall extending between the first end and the second end, the wall being formed to include a driver surface for engaging the wire saw and driving the same during rotation of the body.

Accordingly, claim 30 recites a driver body that rotates and which includes bone cutting teeth at one end and a wall extending from that end of the driver body to the other end and including a driver surface for driving a wire saw during rotation of the body.

2. The Discussion of Claim 1 Applies

As an initial matter, the Examiner rejected claim 30 based upon the same combination and line of reasoning that was discussed above with respect to claim 1.

(Office Action at pages 4-5). Accordingly, claim 30 is patentable over the prior art for at least the same reasons as those set forth above in connection with claim 1.

3. The Mains Driver Does Not Rotate

Additionally, the Examiner has relied upon Mains for disclosing a driver. (Office Action at page 5). The driver of Mains does not disclose all of the limitations of the driver of claim 30.

Specifically, the Examiner has relied upon Mains at column 5, lines 48-49 as disclosing the driver recited in claim 30. (Office Action at page 5). Column 5, lines 48-49 disclose “a side surface 51 of an oscillating saw blade 52 driven by a suitable motor (not shown).” Thus, Mains only discloses a saw blade and a motor which causes the saw blade to oscillate. In contrast, the driver recited in claim 30 includes a wall extending from one end of the body to the second end of the body with a driver surface for driving a wire saw during rotation of the body. Thus, the portion of the driver that engages the saw is *rotating*. Rotation is not the same as oscillation.

Therefore, because the Examiner has failed to identify any prior art as teaching, disclosing or suggesting a body of a driver that *rotates*, even if Mains and Haines are combined in the manner proposed by the Examiner, the proposed modification fails to arrive at the invention of claim 30. Thus, a *prima facie* case of obviousness under 35 U.S.C. § 103 has not been properly alleged and the Board of Appeals is respectfully requested to reverse this rejection of claim 30.

4. A Driver with Teeth Has Not Been Alleged

Moreover, as discussed above, claim 30 recites a body of a driver that includes bone cutting teeth. The Examiner has failed to identify any such limitation in either Mains or Haines. Therefore, because the Examiner has failed to allege any prior art as teaching, disclosing or suggesting a body of a driver that includes bone cutting teeth as recited in claim 30, a *prima facie* case of obviousness under 35 U.S.C. § 103 has not been properly alleged and the Board of Appeals is respectfully requested to reverse this rejection of claim 30.

5. Conclusion

Therefore, for any of the reasons set forth above, a *prima facie* case of obviousness has not been established with respect to the invention of claim 30 and the Board of Appeals is respectfully requested to reverse the rejection of claim 30.

Discussion re: Patentability of Claims 31-32

Claims 31-32 depend from and incorporate all the limitations of claim 30. Claims 31-32 were rejected based upon the same prior art discussed above with respect to claim 30. Accordingly, claims 31-32 are patentable over the prior art for at least the same reasons as those set forth above in connection with claim 30 and the Board of Appeals is respectfully requested to reverse this rejection of claims 31-32.

Discussion Regarding Claim 33

1. Claim 33

Claim 33 recites the following:

The apparatus of claim 31 wherein the saw driver is configured to be guided by the alignment pin through the bone.

Accordingly, claim 33 recites a saw driver that is guided by an alignment pin.

2. The Discussion of Claim 30 Applies

As an initial matter, claim 33 depends from claim 30 through claim 31. The Examiner rejected claim 33 based upon the same combination and line of reasoning that was discussed above with respect to claim 30. (Office Action at pages 4-5).

Accordingly, claim 33 is patentable over the prior art for at least the same reasons as those set forth above in connection with claim 30.

3. A Guided Driver Has Not Been Alleged

Moreover, as discussed above, claim 33 recites a driver that that is guided by an alignment pin. The Examiner has failed to identify any such limitation in the cited art. Additionally, as discussed above, Mains discloses that a *blade* is guided, not a driver. Similarly, Haines discloses a wire is guided, not a driver. Therefore, because the Examiner has failed to allege any prior art as teaching, disclosing or suggesting a driver that is guided by an alignment pin as recited in claim 30, a *prima facie* case of obviousness under 35 U.S.C. § 103 has not been properly alleged and the Board of Appeals is respectfully requested to reverse this rejection of claim 33.

4. Conclusion

Therefore, for any of the reasons set forth above, a *prima facie* case of obviousness has not been established with respect to the invention of claim 33 and the Board of Appeals is respectfully requested to reverse the rejection of claim 33.

Discussion re: Patentability of Claim 34

Claim 34 depends from and incorporates all the limitations of claim 33. Claim 34 was rejected based upon the same prior art discussed above with respect to claim 33. Accordingly, claim 34 is patentable over the prior art for at least the same reasons as those set forth above in connection with claim 33 and the Board of Appeals is respectfully requested to reverse this rejection of claim 34.

Discussion Regarding Claim 35

1. Claim 35

Claim 35 recites the following:

The apparatus of claim 34 wherein the body includes a cavity formed in the second end and extending into the body toward the first end, the cavity being sized to receive the first alignment pin therein.

Accordingly, claim 35 recites a saw driver with a cavity in its body for receiving an alignment pin.

2. The Discussion of Claim 34 Applies

As an initial matter, the Examiner rejected claim 35 based upon the same combination and line of reasoning that was discussed above with respect to claim 34.

(Office Action at pages 4-5). Accordingly, claim 35 is patentable over the prior art for at least the same reasons as those set forth above in connection with claim 34.

3. A Driver Body with a Cavity Has Not Been Alleged

Moreover, as discussed above, claim 35 recites a body of a driver that includes a cavity for receiving an alignment pin. The Examiner has failed to identify any such limitation in the cited art. Therefore, because the Examiner has failed to allege any prior art as teaching, disclosing or suggesting a body of a driver that includes a cavity for receiving an alignment pin as recited in claim 35, a *prima facie* case of obviousness under 35 U.S.C. § 103 has not been properly alleged and the Board of Appeals is respectfully requested to reverse this rejection of claim 35.

4. Conclusion

Therefore, for any of the reasons set forth above, a *prima facie* case of obviousness has not been established with respect to the invention of claim 35 and the Board of Appeals is respectfully requested to reverse the rejection of claim 35.

Discussion Regarding Claim 36

1. Claim 36

Claim 36 recites the following:

The apparatus of claim 30 wherein the driver surface comprises an annular groove formed in the wall.

Accordingly, claim 36 recites a saw driver surface with an annular groove.

2. The Discussion of Claim 30 Applies

As an initial matter, the Examiner rejected claim 36 based upon the same combination and line of reasoning that was discussed above with respect to claim 30. (Office Action at pages 4-5). Accordingly, claim 36 is patentable over the prior art for at least the same reasons as those set forth above in connection with claim 30.

3. A Driver Surface with a Groove Has Not Been Alleged

Moreover, as discussed above, claim 36 recites a saw driver surface with an annular groove. The Examiner has failed to identify any such limitation in the cited art. Therefore, because the Examiner has failed to allege any prior art as teaching, disclosing or suggesting a saw driver surface with an annular groove as recited in claim 36, a *prima facie* case of obviousness under 35 U.S.C. § 103 has not been properly alleged and the Board of Appeals is respectfully requested to reverse this rejection of claim 36.

4. Conclusion

Therefore, for any of the reasons set forth above, a *prima facie* case of obviousness has not been established with respect to the invention of claim 36 and the Board of Appeals is respectfully requested to reverse the rejection of claim 36.

CONCLUSION

Claims 37-44 are not drawn to an invention independent or distinct from the invention originally claimed, claim 30 is not anticipated by Hitt, claims 1-18 and 30-36 are not obvious over Mains in view of Haines and claims 19-21 are not obvious over

Mains. Accordingly, the Board of Appeals is respectfully requested to reverse the withdrawal of claims 37-44 and the rejection of claims 1-18 and 30-36.

Respectfully submitted,

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(8) CLAIMS APPENDIX

Claim 1. A wire cutting system for resecting a bone through incisions of the type utilized for arthroscopic procedures, the system comprising:

a first alignment pin configured to be inserted through one of the incisions into a bone in a first orientation;

a second alignment pin configured to be inserted through one of the incisions into the bone in a second orientation;

a wire saw; and

wherein the first alignment pin and the second alignment pin are configured and oriented to define a resection surface of reference through which the bone is to be resected and the wire saw is configured to be inserted through at least one of the incisions and for extending at least from the first alignment pin to the second alignment pin to be simultaneously guided by the first and second alignment pins while being moved to resect the bone.

Claim 2. The system of claim 1, wherein the first alignment pin has a length sufficient that the first alignment pin extends completely through the bone with one tip extending beyond the bone on a first side and the second tip extending beyond the bone on the opposite side and the second alignment pin has a length sufficient that the second alignment pin extends completely through the bone with one tip extending beyond the bone on a first side and the second tip extending beyond the bone on the opposite side.

Claim 3. The system of claim 2 wherein the resection surface of reference is a plane.

Claim 4. The system of claim 3 and further comprising a guide block formed to include a first guide hole extending through the block, the first guide hole being sized to receive a drill sized to form a hole in the bone sized to receive the first alignment pin.

Claim 5. The system of claim 4 wherein the first alignment pin has a length sufficient that the first alignment pin extends completely through the bone with one tip extending beyond the bone on a first side and the second tip extending beyond the bone on the opposite side and into the first guide hole when the guide block is positioned on the opposite side of the bone.

Claim 6. The system of claim 4 wherein the guide block is formed to include a first saw guide and a second saw guide said first and second saw guides being positioned to guide the saw along the resection plane of reference when the saw is received in the saw guides.

Claim 7. The system of claim 6 wherein the first alignment pin has a length sufficient that the first alignment pin extends completely through the bone with one tip extending beyond the bone on a first side and the second tip extending beyond the bone on the opposite side and into the first guide hole when the guide block is positioned on the opposite side of the bone.

Claim 8. The system of claim 5 wherein the guide block is formed to include a second guide hole extending through the block, the second guide hole being sized to receive a drill sized to form a hole in the bone sized to receive the second alignment pin, the second guide hole being oriented with respect to the first guide hole to define a plane therewith.

Claim 9. The system of claim 8 wherein the second alignment pin has a length sufficient that the second alignment pin extends completely through the bone with one tip extending beyond the bone on a first side and the second tip extending beyond the bone on the opposite side and into the second guide hole when the guide block is positioned on the opposite side of the bone.

Claim 10. The system of claim 9 wherein the guide block is formed to include a first saw guide and a second saw guide said first and second saw guides being positioned to guide the saw along the resection plane of reference when the saw is received in the saw guides, the first alignment pin is received in the bone and the first guide hole and the second alignment pin is received in the bone and the second guide hole.

Claim 11. The system of claim 10 wherein the first saw guide, second saw guide, first guide hole and second guide hole define a plane.

Claim 12. The system of claim 9 wherein the guide block is formed to include a third guide hole extending through the block, the third guide hole being sized to receive a drill sized to form a hole in the bone sized to receive an alignment pin, the third guide hole being oriented with respect to the first guide hole to define a plane therewith oriented at an angle with respect to the plane defined by the first and second guide holes and further comprising a third alignment pin configured to be inserted through a third incision into the bone in a third orientation, the third alignment pin having a length sufficient that the third alignment pin extends completely through the bone with one tip extending beyond the bone on a first side and the second tip extending beyond the bone on the opposite side.

Claim 13. The system of claim 2 and further comprising a saw driver configured to be guided by the first pin through the bone and to drive the saw guided by the saw driver and the second alignment pin through the bone.

Claim 14. The system of claim 13 wherein the saw driver includes a shaft adapted to be driven by a rotary drill to rotate about an axis, a body coupled at a first end to the shaft to be rotated thereby about the axis, the body including a second end formed to include teeth adapted to cut through the bone and a wall extending between the first end and the second end, the wall being formed to include a driver surface for engaging the wire saw and driving the same during rotation of the body.

Claim 15. The system of claim 14 wherein the body includes a cavity formed in the second end and extending into the body toward the first end, the cavity being sized to receive the first alignment pin therein.

Claim 16. The apparatus of claim 15 wherein the wire saw forms a loop and the driver surface comprises an annular groove formed in the wall.

Claim 17. The system of claim 1 and further comprising a saw frame including a shaft adapted to be coupled to an oscillator, a finger coupled to the shaft at one end for movement between a retracted position wherein a second end of the finger is adjacent the shaft and an extended position wherein the second end is displaced from the shaft and wherein the wire saw is coupled to the shaft and the finger adjacent the second end to be tensioned between the shaft and the second finger when the second finger is in the extended position.

Claim 18. The system of claim 17 wherein the second finger is formed from a shape memory alloy.

Claim 19. The system of claim 1 wherein the first and second alignment pins and the wire saw are configured to be inserted through incisions less than six centimeters long.

Claim 20. The system of claim 1 wherein the first and second alignment pins and the wire saw are configured to be inserted through incisions less than about two centimeters long.

Claim 21. The system of claim 1 wherein the first and second alignment pins and the wire saw are configured to be inserted through incisions about one centimeter long.

Claim 30. An apparatus for resecting a bone comprising:
a wire saw;
a saw driver including a shaft adapted to be driven by a rotary drill to rotate about an axis, a body coupled at a first end to the shaft to be rotated thereby about the axis, the body including a second end formed to include teeth adapted to cut through the bone and a wall extending between the first end and the second end, the wall being formed to include a driver surface for engaging the wire saw and driving the same during rotation of the body.

Claim 31. The apparatus of claim 30 and further comprising an alignment pin sized to extend through the bone and wherein the wire saw forms a loop and is configured to engage the driver surface and be driven by the saw driver when it is rotated and driven into the bone.

Claim 32. The apparatus of claim 31 wherein the wire saw when driven is configured to be guided by the alignment pin when the pin is inserted in the bone.

Claim 33. The apparatus of claim 31 wherein the saw driver is configured to be guided by the alignment pin through the bone.

Claim 34. The apparatus of claim 33 and further comprising a second alignment pin sized to extend through the bone and wherein the wire saw forms a loop and is configured to engage the driver surface and be driven by the saw driver when it is rotated and driven into the bone and wherein the saw is configured to be guided by the saw driver and the second alignment pin through the bone.

Claim 35. The apparatus of claim 34 wherein the body includes a cavity formed in the second end and extending into the body toward the first end, the cavity being sized to receive the first alignment pin therein.

Claim 36. The apparatus of claim 30 wherein the driver surface comprises an annular groove formed in the wall.

(9) EVIDENCE APPENDIX

None.

(10) RELATED PROCEEDINGS APPENDIX

None.